

SURFACE-PROFILING SYSTEM AND METHOD THEREFOR

ABSTRACT OF THE DISCLOSURE

5 A surface-profiling system (20) and a process (32) for
implementing same are presented. The system (20) incorporates
a vehicle (40) configured to move upon a surface (24). A
projector (38) is affixed to the vehicle (40) and configured to
project two-dimensional patterns (22) at a first angle (52)
substantially perpendicular to the surface (24). A camera (48)
10 is also affixed to the vehicle (40) and configured to capture
images (50) of the projected patterns (22) from a second angle
(54) oblique to the surface (24) as the vehicle (40) moves over
the surface (24). A computer (72) is configured to produce a
transverse profile (26) of the surface (24) from each captured
15 image (50) and configured to derive a longitudinal profile (28)
of the surface (24) from a series (126) of the transverse
profiles (26).

0964105-052301